

Amendments to the Claims

Listing of the Claims

The following is a complete listing of revised claims with a status identifier in parenthesis.

1. (Canceled)

2. (Previously Presented) The semiconductor chip package of claim 3, wherein the solder film includes one selected from a group consisting of Pb, Sn, Ag, In, and Bi.

3. (Previously Presented) A semiconductor chip package comprising:
a substrate having a plurality of bonding pads;
a semiconductor chip having a plurality of conductive bumps on a front side thereof, the conductive bumps contacting the bonding pads;
a heat slug bonded to a backside of the semiconductor chip; and
a solder film directly attached to the heat slug thereby bonding the heat slug to the backside of the semiconductor chip, wherein the backside of the semiconductor chip includes a solder bonding metal layer ~~formed thereon for strengthening adhesion~~ in contact with and between the semiconductor chip and the solder film.

4. (Original) The semiconductor chip package of claim 3 wherein the metal layer is a multi-layered film selected from a group consisting of VN_i/Au, Ti/VN_i/Au, Cr/VN_i/Au, Ti/Pt/Au, Cr/CrCu/(Cu)/Au, TiW/(Cu, NiV)/Au, VN_i/Pd, Ti/VN_i/Pd, Cr/VN_i/Pd, Ti/Pt/Pd, Cr/CrCu/(Cu)/Pd and TiW/(Cu, NiV)/Pd.

5. (Previously Presented) The semiconductor chip package of claim 3, wherein a space between the semiconductor chip and the substrate is filled with an underfilling material.

6. (Previously Presented) The semiconductor chip package of claim 3, wherein the solder film has a size equal to or larger than a size of the semiconductor chip.

7. (Previously Presented) The semiconductor chip package of claim 3, wherein the heat slug is formed of a material selected from a group consisting of Cu, Al, and CuW.

8. (Previously Presented) The semiconductor chip package of claim 3, wherein the heat slug comprises a solder bonding layer formed on a surface of the heat slug that contacts the solder film.

9. (Previously Presented) The semiconductor chip package of claim 8, wherein the solder bonding layer is a layer selected from a group consisting of a Ni/Au layer, a Ag layer, and a Pd layer.

10. (Previously Presented) The semiconductor chip package of claim 3, wherein the heat slug is coated with an anodizing layer on a surface of the heat slug that is opposite to another surface of the heat slug, on which the semiconductor chip is bonded.

11. (Previously Presented) The semiconductor chip package of claim 3, wherein the heat slug is shaped such that a portion of the heat slug is attached to the substrate by an adhesive.

12. (Original) The semiconductor chip package of claim 11, wherein the adhesive includes silicon rubber or elastomer.

13. (Previously Presented) The semiconductor chip package of claim 3, wherein a plurality of throughholes are formed on the heat slug.

14. (Previously Presented) A method of fabricating a semiconductor chip package, comprising:

preparing the semiconductor chip having a plurality of conductive bumps on a front surface of the semiconductor chip and a solder bonding metal layer on a backside of the semiconductor chip;

bonding a heat slug on the backside of a semiconductor chip using a solder film; and

attaching the semiconductor chip on a substrate such that the conductive bumps of the semiconductor chip contact a plurality of bonding pads on the substrate wherein the solder bonding metal layer on the backside of the semiconductor chip ~~strengthens adhesion~~ is in contact with and between the semiconductor chip and the solder film.

15. (Previously Presented) The method of claim 14, further comprising filling a resin into a space between the semiconductor chip and the substrate.

16. (Canceled)

17. (Previously Presented) The semiconductor chip package of claim 19, wherein the solder film has a size equal to or larger than a size of the semiconductor chip.

18. (Previously Presented) The semiconductor chip package of claim 19, wherein the heat slug is formed of a material selected from a group consisting of Cu, Al, and CuW.

19. (Previously Presented) A semiconductor chip package comprising:
a substrate having a plurality of bonding pads;
a semiconductor chip having a plurality of conductive bumps on a front side thereof, the conductive bumps contacting the bonding pads;
a heat slug bonded to the semiconductor chip, the heat slug comprising a top portion, side standing portions bent from the top portions, and side end portions bent again from the side standing portions; and
a conductive solder film that bonds the heat slug to the backside of the semiconductor chip wherein the heat slug contacts the solder film and the side end portions of the heat slug are attached to the substrate by an adhesive, and wherein the heat slug comprises a solder bonding layer formed on a surface of the heat slug that contacts the solder film, and wherein the backside of the semiconductor chip includes a solder bonding metal layer in contact with and between the semiconductor chip and the solder film.

20. (Previously Presented) The semiconductor chip package of claim 19, wherein the heat slug is coated with an anodizing layer on a surface of the heat slug that is opposite to another surface of the heat slug, on which the semiconductor chip is bonded.
